

ABSTRACT OF THE DISCLOSURE

In a limiting current type oxygen sensor, a plane cathode layer and a plane anode layer are arranged on both sides of a solid electrolyte layer, and a porous diffusion layer for controlling gaseous diffusion rate is arranged on the other side of the cathode layer. Additionally, the cathode layer has a bonding pad portion for connecting electrically to an external lead wire. A part of the bonding pad is in contact with the solid electrolyte layer, and the other part of the bonding pad is exposed to an atmosphere of the sensor. A patterned gas barrier film is disposed in between a boundary between the part of the bonding pad being in contact with the patterned solid electrolyte layer and the other part of the bonding pad exposed to the atmosphere, and surroundings thereof so as not to expose the boundary directly to the atmosphere.